

Title (en)

DEVICE AND METHOD FOR THE DIAGNOSIS OF A PNEUMONIA BY ANALYSIS OF ULTRASOUND IMAGES

Title (de)

VORRICHTUNG UND VERFAHREN ZUR DIAGNOSE VON PNEUMONIE DURCH ANALYSE VON ULTRASCHALLBILDERN

Title (fr)

DISPOSITIF ET MÉTHODE DE DIAGNOSTIC D'UNE PNEUMONIE PAR ANALYSE D'IMAGES ULTRASONORES

Publication

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Application

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Priority

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- IT 202000009667 A 20200505

Abstract (en)

[origin: WO2022234317A1] Method for calculating a diagnostic parameter indicating the stage of a pneumonia, implementable by means of a computer program loaded on computing means associated to an ultrasound device, comprising the steps of: (100) acquiring a plurality of ultrasound images of the lung of a patient in a first acquisition position, (200) individuating, inside each image the area under the pleural line; (300) individuating a plurality of ultrasound makers (C1,..., Cn) therein; (400) calculating for each of said ultrasound markers (C1,..., Cn) a plurality of features (C11,..., C1m,..., Cn1,..., Cnm), comprising pleural line, A-lines, B-lines and consolidations, (450) calculating at least another parameter relating to all the images acquired at point (100) as a whole, comprising the percentage of pleural line interested by "White lung"; (500) calculating a diagnostic parameter representing the severity of the pneumonia with a two steps procedure: a first step, in which to each ultrasound image acquired at point (100) a first value of Pneumonia Score is assigned as a function of the number of A-lines, the number and configuration of B-lines and the pleural line continuity, and a second step, in which the average of the first values calculated for each image acquired at point (100) is corrected as a function of said at least further parameter calculated at point (450) and relating to all the images acquired in the first acquisition position.

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